BASF Aktiengesellschaft

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We claim:

1. A method of producing at least one coating film on at least one area of a substrate surface, which comprises at least the following steps in the following order:

   a) initiating at least one crosslinking reaction in at least one reactive coating formulation;

   b) applying said at least one reactive coating formulation before the onset of said at least one crosslinking reaction on said at least one area of said substrate surface.

2. A method as claimed in claim 1, wherein the crosslinking reaction of said at least one reactive coating formulation in step a) is initiated optically, in particular by UV exposure.

3. A method as claimed in claim 1, wherein said reactive coating formulation comprises at least one photoinitiator.

4. A method as claimed in claim 1, wherein said crosslinking reaction is kinetically controllable.

5. A method as claimed in claim 4, wherein the kinetic control of said crosslinking reaction is effected by varying the temperature of said reactive coating formulation and/or by using a crosslinking reaction which proceeds sufficiently slowly, in particular a cationic polymerization, and/or by spatially separating said at least one photoinitiator from the coating formulation constituents to be crosslinked and/or by reducing the reactivity of said at least one photoinitiator.

6. A method as claimed in the preceding claim, wherein the spatial separation of said at least one photoinitiator from said coating formulation constituents to be crosslinked is achieved by nanostructuring of the coating formulation.

7. A method as claimed in claim 1, further comprising after step a) and before step b) at least the following additional step:

a') admixing at least one UV stabilizer to said at least one reactive coating formulation.

8. A method as claimed in claim 1, further comprising after step a) and before step b) at least the following additional step:

a") admixing at least one pigment to said at least one reactive coating formulation.

9. A method as claimed in claim 1, wherein the application of said at least one reactive coating formulation before the onset of said at least one crosslinking reaction on said at least one area of said substrate surface in step b) takes place with the aid of a manual spray-gun.

10. A means of producing at least one coating film on at least one area of a substrate surface, having at least the following elements:

a) at least one storage container for at least one reactive coating formulation,

b) at least one exposure unit, preferably a UV exposure unit, more preferably a UV laser, and

c) at least one application unit having a nozzle, in particular a spraying head, and/or

d) a bell for electrostatic application (ESTA bell),

wherein

said at least one exposure unit is designed so that the radiation generated in said at least one exposure unit is brought into contact with said at least one reactive coating formulation in said at least one application unit.

11. A means as claimed in claim 10, wherein at least one optical waveguide is used in order to bring the light generated in said at least one exposure unit into contact with said at least one reactive coating formulation in said at least one application unit.

~~12. A coating film which can be produced by a method as claimed in claim 1.~~

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